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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,869	10/26/2000	Taichi Shino	2000 1452A	2975

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Wenderoth Lind & Ponack LLP
2033 K Street NW Suite 800
Washington, DC 20006

EXAMINER

NGUYEN, CHANH DUY

ART UNIT	PAPER NUMBER
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2675

19

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,869

Applicant(s)

SHINO ET AL.

Examiner

Chanh Nguyen

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on April 30, 2004 has been entered and considered by examiner.

Obvious Type Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 16 and 21-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,320,326 in view of Kanazawa (U.S. Patent No. 6,288,692 B1), and further in view of Yamada (U.S. Patent No. 6,275,203).

Claims 1-8 of the U.S. Patent No. 6,320,326 discloses an alternate current plasma display panel as recited in claims 16 and 21-23 of the instant application with exception of describing the structure of the plasma display such as a first substrate, a second substrate, phosphor, a dielectric layer, a barrier. However, these limitation is

Art Unit: 2675

well-known in the art as taught by Kanazawa. The limitations display electrodes and conductor recited in independent claim 16 of the application reads on two pairs of scan and sustain electrodes as recited in claims 1-8 of the U.S. Patent No. 6,320,326. That is "means for applying a certain current to said scan and sustain electrodes so that said current in one of said two pairs flows in one direction and said current in the other of said two pairs flows in the opposite direction" (Figure 11) recited in independent claims 1 and 8 reads on the limitation conductor are arranged so that when a pulse voltage is applied to the display electrode, current run through the conductors in a reverse direction to a current running through the display electrodes" as well as the limitation "each of said conductors being electrically connected to said sustain electrode of a respective one of said display electrodes" as recited in independent claim 16 of this invention. Kanazawa teaches an alternate current plasma display panel including a first insulating substrate and second substrate (i.e., front glass substrate and rear glass substrate) being transparent and disposed facing each other to form a discharge space. Kanazawa teaches a plurality of display electrodes (51, 52) disposed over the first insulating substrate (front glass), each display electrodes including a scan electrode (51) and a sustain electrode (52); see figure 13 and 14. Kanazawa teaches a plurality of data electrodes (53) disposed over the second insulating substrate (rear glass substrate) and being disposed perpendicular to the display electrodes (51 and 52); see Figures 13 and 14. Kanazawa teaches well-known Figures 2-3 having a plurality of phosphors (27) placed along the data electrode and a dielectric layer (24) covering the display electrode as recite in claim.

Art Unit: 2675

Kanazawa teaches a barrier (58) disposed on the dielectric layer (i.e. dielectric layer 24 referred to Figures 2-3) the barrier extending longitudinally approximately parallel with the display electrodes (51, 52). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have to used the structure of the plasma display such as a first substrate, a second substrate, phosphor, a dielectric layer, a barrier as taught by Kanazawa to the U.S. Patent No.6,320,326 so that display contrast can be improved; see column 2, lines 60-67 of Kanazawa.

Kanazawa and Shino discloses an alternate current plasma display panel as recited in claim 1 with exception of describing the limitation "reverse of a polarity". Yamada teaches the voltages applied to the scan electrodes and sustain electrodes being opposite polarity; see figures 6, 19-20 and column 10, lines 15-60. Since one of the conductors of Shino physically connects to scanning line. Thus, at least one of the conductor as the same polarity as the scanning conductor which is opposite polarity of the sustain electrode as modified by Yamada. Furthermore, Claim 2 of U.S. 6,320,326 recites the limitation "wherein current flow through a capacitance between a pair of scan and sustain electrodes and a pairs of scan and sustain electrodes in neighboring row so that an electromagnetic noise generated from the current counteracts by itself". This also reads on the limitation "said conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave generated by a current running through a respective one of said display electrodes" as recited in claim 16 of this application.

Art Unit: 2675

Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the voltages applied to scan and sustain electrodes with opposite polarity as taught by Yamada to the driving circuit of Kanazawa as modified by Shino so that an electromagnetic noise generated in the electrodes can be canceled by another.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al (U.S. Patent No. 6,288,692) in view of Shino et al (U.S. Patent No. 6,320,326 B1), and further in view of Yamada (U.S. Patent No. 6,275,203).

As to claim 16, Kanazawa discloses an alternate current plasma display panel including a first insulating substrate and second substrate (i.e., front glass substrate and rear glass substrate) being transparent and disposed facing each other to form a discharge space. Kanazawa teaches a plurality of display electrodes (51, 52) disposed over the first insulating substrate (front glass), each display electrodes including a scan electrode (51) and a sustain electrode (52); see figure 13 and 14. Kanazawa teaches a plurality of data electrodes (53) disposed over the second insulating substrate (rear

Art Unit: 2675

glass substrate) and being disposed perpendicular to the display electrodes (51 and 52); see figure 13 and 14. Kanazawa teaches well-known Figures 2-3 having a plurality of phosphors (27) placed along the data electrode and a dielectric layer (24) covering the display electrode as recite in claim. Kanazawa teaches a barrier (58) disposed on the dielectric layer (i.e. dielectric layer 24 referred to Figures 2-3) the barrier extending longitudinally approximately parallel with the display electrodes (51, 52).

The only thing different between Kanazawa and the claim 16 is that Kanazawa does not teach one or more conductor being adjacent to a respective display electrode, each of the conductors being spaced from a scan electrode and the sustain electrode of a respective one of the display electrodes; wherein said conductor are arranged so that when a pulse voltage is applied to the display electrode, current run through the conductors in a reverse direction to a current running through the display electrodes. | Shino teaches the same way as applicant claimed device. That is Shino teaches well known feature of one or more conductors (e.g., SUSi-1, b) being adjacent a respective one of the display electrodes (e.g., SUSi-1, a), each of the conductors (e.g., SUSi-1,b) being spaced from a scan electrode (e.g., SCNi-1, a) and the sustain electrode (SUSi-1,a) of a respective one of the display electrodes, and each of the conductors (SUSi-1,b) connected to the sustain electrode (SUSi-1,a) of a respective one of the display electrodes (e.g., see Figure 11); wherein said conductor are arranged so that when a pulse voltage is applied to the display electrode, current run through the conductors in a reverse direction to a current running through the display electrodes (i.e. current of

Art Unit: 2675

conductor SUSi-1,b flows from right to left whereas current of display electrode SUSi-1, a and flow from left to right); see Figure 11. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have added a conductor (SUSi-1, b) as taught by Shino with display data of Kanazawa so that an electromagnetic noise generated in the electrodes can be canceled by another (see column 12,lines 23-41 of Shino).

Kanazawa and Shino discloses an alternate current plasma display panel as recited in claim 1 with exception of describing the limitation "reverse of a polarity". Yamada teaches the voltages applied to the scan electrodes and sustain electrodes being opposite polarity; see figures 6, 19-20 and column 10, lines 15-60. Since one of the conductors of Shino physically connects to scanning line . Thus, at least one of the conductor as the same polarity as the scanning conductor which is opposite polarity of the sustain electrode as modified by Yamada. Furthermore, Shino even suggests the limitation "reverse polarity" as recited in the claim. For example, Shino teaches that "wherein current flow through a capacitance between a pair of scan and sustain electrodes and a pairs of scan and sustain electrodes in neighboring row so that an electromagnetic noise generated from the current counteracts by itself" (see column 19, lines 5-10). This also reads on the limitation "said conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave generated by a current running through a respective one of said display electrodes" as recited in claim 16 of this application.

Art Unit: 2675

Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the voltages applied to scan and sustain electrodes with opposite polarity as taught by Yamada to the driving circuit of Kanazawa as modified by Shino so that an electromagnetic noise generated in the electrodes can be canceled by another.

As to claim, 21, Figure 4 of Shino clearly teaches the claimed "reverse order" as recited in the claim.

As to claim 22, Kanazawa clearly teaches the barrier (58) being disposed between adjacent rows (52).

As to claim 23, photo-absorptive material barrier is known in the art, even taught by Kanazawa so as to prevent the light from leak.

Response to Arguments

5. Applicant's arguments filed April 30, 2004 have been fully considered but they are not persuasive.

As to the obviousness type double patenting, page 4, second paragraph of the Remarks, applicant states that "these rejection are believe to moot with respect to claims 17, 19, 25-28 and 30-31 in view of the cancellation of these claims". However, the limitations originally presented in cancelled claims 17 and 25, now added to claim 16 are met by U.S. Patent No. 6,320,326 in view of Kanazawa and Yamada. Even the

Art Unit: 2675

limitation "reverse polarity" is suggested by U.S. Patent No. 6,320,326 recited in claim 2.

On page 6, last paragraph, applicant argues that Kanazawa does not disclose or suggest a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, as recited in claim 16.

Examiner disagrees with applicant this point of view since Kanazawa teaches a barrier (58) disposed on the dielectric layer (i.e. dielectric layer 24 referred to Figures 2-3) the barrier extending longitudinally approximately parallel with the display electrodes (51, 52). Applicant further argues that the barrier of claim 16 is therefore recited as being closed to the second substrate than the display electrode and the conductors.

However, this feature is not recited in the claim.

On page 7, applicant argues that the barrier (58) of Kanazawa is clearly disclosed as being farther from the rear glass substrate than the scan electrodes, the sustain electrodes and the conductor. Again, claim 16 does not recite the feature a barrier closed to the second substrate than the display electrode and the conductors.

On page 7, Applicant further argues that the specification of Shino also clearly does not or suggest a barrier disposed on the dielectric layer such that the barrier extends longitudinal approximately parallel with the conductors, as recited in claim 16.

Examiner disagrees with applicant this point of view because Kanazawa clearly teaches a barrier (58) disposed on the dielectric layer (i.e. dielectric layer 24 referred to Figures 2-3) the barrier extending longitudinally approximately parallel with the display electrodes (51, 52).

On page 8, applicant argues that claims 1-8, and the disclosure of Shino do not recite an AC display panel comprising one or more conductors disposed over the first substrate, where each of the conductors are adjacent to a respective one of display electrodes, each of the conductors or spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16. Again, Examiner disagrees with applicant this point of view because claim 1 of Shino teaches that "means for applying a certain current to said scan and sustain electrodes so that said current in one of said two pair flows in one direction and said current in the other of said two pairs flows in the opposite direction". At least Figure 11 of Shino describes the limitation above. Figure 11 of Shino shows the same way as Figure 4 of the invention in order to perform the function of "reverse current direction". Applicant simply presents Figure 1 of the Shino, but does not take into consideration number of different embodiments described in Shino. That is at least Figure 11 of Shino teaches the limitation "the conductor electrically connected to the sustain electrode of a respective one of the display electrodes".

Last paragraph of page 8 through page 9, applicant argues that Kanazawa and Yamada do not teach the limitation "one or more conductors disposed over the first substrate, where each of the conductors are adjacent to a respective one of display electrodes, each of the conductors or spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display

Art Unit: 2675

electrodes", as recited in claim 16. However, this limitation is taught by Shino as previously discussed above. Kanazawa is used to show well-known in the art of the feature phosphor, dielectric layer and barrier, and Yamada is used to show the limitation "reverse of a polarity".

On pages 10-11, Applicant argues that Shino clearly does not disclose or suggest conductors being arranged so that, when a pulse voltage is applied to the displayed electrodes, which comprise both sustain and scan electrodes, currents run through the conductors in a reverse direction to a current running through the display electrodes, as recited in claim 16. However, Figure 11 of Shino discloses the direction of the current as the same way as applicant disclosed device. For example, the current flowing of SCNi-1, a and SUSi-1,a as well as SUSi-1, b in Figure 11 of Shino is arranged the same way as SCN2j-1 and SUS2j-1 as well as CW2j-1 in Figure 4 of the invention. There is no patentability distinct between current flow in Figure 11 of Shino and Figure 4 or Figure 9 of the invention.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2675

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Steven Saras can be reached at 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Art Unit: 2675

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



C. Nguyen
July 10, 2004



CHANH NGUYEN
PRIMARY EXAMINER